

# Simulated phacoemulsification training with artificial eyes

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## Article reference of the review

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Learning phacoemulsification cataract surgery is an ambitious and intimidating goal for all ophthalmologists, but it is entirely doable. The most important stage of learning is the initial reflection to organize to meet the training requirements.

In surgical education, the attitude of students is as important as the role of professors, because, while teaching is the responsibility of the professors, learning is the student's responsibility.

Learning, we believe, cannot be simple. It must be a process that involves the student actively. For instance, you must understand the technique, learn the musical notation, and practice a lot to play the guitar. Therefore, if you want to perform phacoemulsification, you must first understand the technique and technology, as well as train the fundamentals, develop a surgical approach, and practice a lot. This is how cognitive abilities are trained. You acquire knowledge not by looking and doing but by studying, understanding, and training with consciousness.

The best way to learn phacoemulsification is to:

- 1 - Study and understand the technique.
- 2 - Study and understand the technology (master phacoemulsification control).
- 3 - Train in simulators.
- 4 - Actively participate in the surgeries that you attend, understand the techniques, interpret the eye's reaction, and even offer the surgeon advice.
- 5 - Perform the surgery to hone your manual skills and apply your technique and technology knowledge into practice.

Simulation-based training is becoming increasingly popular among Ophthalmology residents for educational purposes. This type of training is meant to ensure safety and proper training before applying skills to actual patients.

There are many artificial eyes used to train cataract surgeons, known as dry-labs, but the main barrier is the cost of the equipment. A novelty that will lower training costs and enable this surgical simulation modality is the use of artificial eyes with national technology. This innovation will permit the dissemination of this teaching tool and enhance learning about phacoemulsification.

The number of surgeries performed in teaching hospitals has decreased as a result of the COVID-19 pandemic and new government regulations establishing quotas for cataract surgery in the public health system. Therefore, residents who are committed to learning phacoemulsification must organize themselves.